

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes the following changes:

In Fig. 5, Applicants amend S4 to indicate "Machining (e.g., pressing/deforming) length of sheet metal."

Attachment: One Replacement Sheet.

REMARKS

Claims 1, 8-10, 12 and 13 are pending, with claims 1 and 13 being written in independent form. By virtue of this Amendment, Applicant cancels claim 11 without prejudice or disclaimer.

I. Examiner Interview:

Applicant thanks the Examiner for the courtesies extended during the telephone interview conducted on December 14, 2006. During the interview, Applicant presented arguments against the alleged “new matter” objections and 112(1st) rejections. The Examiner expressed concern about claim 1 characterizing the wave shaped edges as “wave shaped waste portions” prior to being removed from the length of sheet metal. In view of the interview, Applicant amends claim 1 by deleting the term “wave shaped waste portions” in favor of “after machining, removing and rejecting the wave shaped forward and following edges from each sheet metal length.” This term substitution conveys the same basic idea, i.e., that the wave shaped edges are removed (after machining) and considered scrap.

The Examiner also expressed concern about the term “a subsequent operation” appearing in claim 1. Specifically, the Examiner reasoned that it is unclear when the “subsequent operation” actually occurs. To clarify the claim, Applicant altogether deletes the term “firmly holding in a subsequent operation.” Amended claim 1 also recites that the “machining” feature occurs “while clamping” the wave shaped edges.

Applicant discussed a proposed amendment to Fig. 5, which the Examiner agreed with.

Finally, Applicant presented traversal arguments against the anticipation rejection of independent claims 1 and 13 based on the Uehlinger reference. No agreement was reached with respect to independent claims 1 and 13.

The above description, which is believed to satisfy the requirements on MPEP 713.04, is intended as an explanation only and is not intended to limit the invention defined by claims of the present application. In addition, the following remarks reflect (among other things) the various points discussed during the interview.

II. Alleged New Matter:

The Examiner objects to a couple of features (added to the application via the August 3, 2006 Amendment) for allegedly lacking sufficient support in the originally filed application. Each feature is discussed separately below.

A. The “wave shaped waste portions” (appearing in claims 1, 11 and 12) and the removing of “wave shaped edges” (appearing in claim 13):

The Examiner reasons that the specification broadly discloses a machine step, which may or may not yield “wave shaped waste portions.” For support, the Examiner provides an example in which a press may cut off *individual* waves or wave portions, thus leaving scrap that is not necessarily wave shaped. Applicant disagrees.

The Examiner’s position is incorrect on its face. As recognized by the Examiner, *individual* waves of the wave shaped edge portion 23 may be removed from the sheet metal sections. Indeed, the removal of individual waves (as opposed to removing more of the sheet metal sections) may reduce material wastage. However, the Examiner fails to appreciate that the individual waves (once removed) would still have a wave shape. For example, each individual wave (or piece of scrap) may have a curved wave shape (as shown in Fig. 2), a square wave shape, and/or a saw-tooth wave shape, as described at paragraph [0024] of the specification. In short, the fact that individual waves may be removed does not somehow change the shape of the same. The Examiner’s allegations to the contrary are simply incorrect.

Nevertheless, and as a path of least resistance, Applicant amends the claims by altogether deleting the objectionable term “wave shaped wave portions” as discussed above in section I.

B. The removing feature, which is separate and distinct from the machining feature (appearing in claim 1, 11 and 12) or the deforming feature (appearing in claim 13):

The Examiner reasons that the specification only mentions rejecting the waste, but it does not support a “removing” feature separate and distinct from the machining/deforming feature. Applicant disagrees.

Paragraph [0026] indicates that the wave shaped edge portions 23 (of a sheet metal section, e.g., 13, 15 or 17) are clamped during a pressing operation, otherwise the sheet metal section 13, 15 or 17 would not be properly pressed. When the pressing operation is completed,

the wave shaped edge portions 23 are considered “*wastage*” and are rejected. And according to paragraph [0006], the edge portions of the sheet metal sections (which are clamped during the pressing operation) are considered “*wastage*” because they are “cut off upon completion of the pressing operation.” Thus, the specification clearly and unequivocally teaches that “*wastage*” refers to portions of the sheet metal sections that are removed after completion of the machining operation. Certainly then, the deformation and removing features do not occur simultaneously, as alleged by the Examiner.

For similar reasons, Applicant believes that the Examiner’s objection regarding Fig. 5 is incorrect.

III. Claim Rejections Under 35 USC §112(1st):

The Examiner rejects claims 1, 8, and 10-13 under 35 USC §112(1st) for reciting features that lack written description support and for the same reasons set forth with respect to the new matter objections. Applicant believes that the Examiner is incorrect for all of the reasons noted in section II above.

IV. Drawing Objection:

The Examiner objects to the drawings for failing to show the “deforming” feature appearing in claim 13. As a path of least resistance, Applicant amends S4 of Fig. 5 to indicate “Machining (e.g., pressing/deforming) length of sheet metal.” Support for this drawing change is found at paragraph [0012] of the specification.

V. Claim Rejections on Prior Art Grounds:

The Examiner rejects claims 1, 8 and 11-13 under 35 USC §102(b) as being anticipated by US 4,681,001 to Uehlinger et al. (“Uehlinger”); and claim 10 under 35 USC §103(a) as being obvious over Uehlinger in view of US 6,705,979 to Sakaguchi et al. (“Sakaguchi”). Applicant respectfully traverses all of these rejections in view of the following remarks.

A. Independent Claim 1:

Independent claim 1 defines a method that involves (among other things) “after machining, removing and rejecting the wave shaped forward and following edges from each sheet metal length.”

The Examiner relies upon the Uehlinger reference to teach each and feature of the invention defined by claim 1. However, as pointed out in the August 3, 2006 Amendment, Uehlinger is not pertinent to “removing and rejecting” the wave shaped edges (as recited in claim 1) because large portions of the wavy edges of Uehlinger’s sheet are occupied by blanks 1c, which are not scrap.

Turning to the next point, Uehlinger is not pertinent to a “removing” feature that occurs after machining. This is because Uehlinger’s sheet metal is scrolled (i.e., cut transversely and/or longitudinally) and then blanked to provide a plurality of circular discs. Each circular disc is then deformed to provide an end component 110, as shown in Fig. 5c. The end component 110 is not cut (or otherwise machined) to remove material.

During the interview the Examiner attempted to argue that the circular blanks (e.g., 1c in Fig. 3A) are provided on the sheet of material by pressing and deforming the sheet material (and that this is done prior to the scrolling and blanking processes). Applicant disagrees. In Uehlinger, the circular blanks are shown on the sheets of material for explanation purposes only (i.e., to show a general layout). The blanks are not, however, physically provided on the actual sheet of material. Doing so would serve no apparent purpose and would in fact involve increased material handling and additional equipment, which is contrary to Uehlinger’s express objectives (see col. 2, lines 55-65).

B. Independent Claim 13:

Independent claim 13 defines a method that involves (among other things) “removing the leading and the trailing wave shaped edges from the formed length of sheet metal.”

The Examiner again looks to the Uehlinger reference to teach each and every feature of the invention defined by claim 13. However, as noted above with respect to claim 1, Uehlinger teaches that the sheet metal is scrolled (i.e., cut transversely and/or longitudinally) and then blanked to provide a plurality of circular discs. Each circular disc is then deformed to provide an end component 110, as shown in Fig. 5c. The end component 110 is not cut (or otherwise

machined) to remove material. Certainly then, the reference is not pertinent to removing wave shaped edges from the deformed length of sheet metal, as recited in claim 13.

CONCLUSION

In view of the above, Applicant earnestly solicits reconsideration and allowance of all of the pending claims.

The Commissioner is authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,
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DJD/HRH:lmg
Attachment: One (1) Replacement Drawing Sheet